

REMARKS

By the above amendment, the claims have been amended to clarify features of the present invention, as will be discussed below, while being amended to delete reference numeral designations therein. Additionally, the abstract has been amended to delete reference numerals and clarify features so that the objection to the abstract should now be overcome.

Applicants note that the present invention relates to a magnetic device for an NMR measurement apparatus which requires extremely high magnetic homogeneity in an examination of a volume region. In accordance with the present invention, as illustrated in Figures 6 and 7, for example, a magnet for an NMR analyzer is provided in which an electric conductor 4, for example, is wound around an axis 15 as a magnetic axis, whereby a magnetic field, which includes a measurement space 3, as shown in Fig. 6, for conducting measurement, is generated in the space which is surrounded by the electric conductor. As shown, a first access port 1 for receiving a probe 10 for measuring an NMR signal which is inserted into the first access port which enables access from the outside of the magnet to the measurement space is provided in the vicinity of the magnet axis, and a second access port 2 for receiving a tube containing a sample 11 to be measured, and which enables access in a direction different from that of the first access port is provided. That is, in the NMR measuring apparatus, the sample must be introduced through a narrow access port into the measurement space and as described in the paragraph bridging pages 20 - 21, the measurement sample is contained in a 5 to 10 mm test tube which is radially inserted into the access port 2. As described in the paragraph bridging pages 19 and 20 of the specification, the inner diameter of the axial access port, which is represented by the access port 1, is 54mm, whereas the inner diameter of the

radially access port represented by the access port 2, is 20mm. In accordance with the present invention, the effective diameter of the second access port is smaller than that of the first access port. Furthermore, the positions of the probe and the sample meet in the measurement space so that NMR measurement can be conducted. Such features are recited in each of independent claims 1, 2, 12 and 13 and the dependent claims thereof, and applicants submit that such features are not disclosed or taught in the cited art as will become clear from the following discussion.

The rejection of claims 1 - 20 under 35 USC 102(b) as being anticipated by Laukien et al (USPN 5,168,211), is traversed, insofar as it is applicable to the present claims and reconsideration and withdrawal of the rejection are respectfully requested.

As to the requirements to support a rejection under 35 USC 102, reference is made to the decision of In re Robertson, 49 USPQ 2d 1949 (Fed. Cir. 1999), wherein the court pointed out that anticipation under 35 U.S.C. §102 requires that each and every element as set forth in the claim is found, either expressly or inherently described in a single prior art reference. As noted by the court, if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if the element is "inherent" in its disclosure. To establish inherency, the extrinsic evidence "must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill." Moreover, the court pointed out that inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.

Irrespective of the position set forth by the Examiner, applicants note that Laukien et al is directed to a structural arrangement of a magnet system for full body NMR tomography, wherein a patient is introduced into the system by way of the transverse opening 15, as described in column 7, lines 10 - 25, for example. Thus, applicants submit that the NMR imaging apparatus of Laukien et al does not require a high homogeneity in a sample space, and applicants submit that Laukien et al does not disclose the features as now recited in each of the independent claims 1, 2, 12 and 13 of a probe for measuring an NMR signal being insertable into a first access port for receiving the probe and through which access from the outside of the magnet to the measuring space is possible via the vicinity of the magnet axis, and in which a second access port for receiving a tube which contains a sample to be measured and which enables access in a direction different from a direction of access of the first access portion is provided. It is readily apparent that Laukien et al provides no disclosure or teaching of a probe, as recited, insertable in the direction of the magnetic access through a first access port, and a tube which contains a sample to be measured being inserted in a direction different from a direction of access of the first access port through a second access port. It is noted that Laukien et al discloses a patient body being inserted for measurement purposes, which apparently cannot be considered a sample contained in a tube. Furthermore, it is readily apparent that the location and effective diameters as recited in claims 1 and 2, in which the effective diameter of the second access port is smaller than that of the first access port, and the fact that the probe has a solenoid-type detection coil and the positions of the probe and the sample meet in the measurement space so that NMR measurement can be conducted as recited in claims 12 and 13, is not disclosed in Laukien et al. Thus, applicants submit that each of independent claims

1, 2, 12 and 13 patentably distinguish over Laukien et al in the sense of 35 USC 102 and should be considered allowable thereover.

With respect to the dependent claims, it is noted that dependent claims 3 and 4 have been amended to recite the feature that the second access port passes through the magnet and has an effective diameter of about 20mm. Applicants note that as disclosed by Laukien et al, the size of the openings 12, 15 and 16 are on the order of several tens centimeters such as 40cm, 60cm, or larger. The other dependent claims recite additional structural features, which when considered in conjunction with the parent claims, further patentably distinguish over the cited art, and applicants note that with the structural arrangement as set forth in the independent and dependent claims, it is possible to increase the magnetic homogeneity in the sample or measurement space so that the magnetic device can be made compact and such features are not disclosed by Laukien et al in the sense of 35 USC 102. Thus, applicants submit that the independent and dependent claims patentably distinguish over Laukien et al in the sense of 35 USC 102 and should be considered allowable thereover.

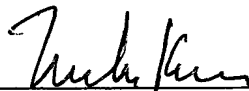
In view of the above amendments and remarks, applicants submit that all claims present in this application patentably distinguish over the cited art and should now be in condition for allowance. Accordingly, issuance of an action of a favorable nature is courteously solicited.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing

of this paper, including extension of time fees, to the deposit account of Antonelli,
Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 520.43727X00),
and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP



Melvin Kraus
Registration No. 22,466

MK/jla
(703) 312-6600